SUBJECT INDEX

Abbottabad Formation 100–101, 146, 278
Agglomerate Group 12
Agglomeratic Slate Formation 85–87, 138, 208, 278
Aghil Formation 264
Akpa Granite 127
Alaknanda River 2, 3
Almora Granite 78
Almora Nappe 77–79
Almora Thrust 79
Alpuri Schist 143, 144
Amb Formation 90, 93
Ambela Granite 88
Amber Dolomite 97
Amlang La Ophiolite 294, 317
Amri Formation 73
Amri Thrust 75
Amritpur Granite 76, 77
Aq Tash Formation 246, 248, 250
Arnas Formation 18
Asapuri Formation 30
Asian Plate 273, 320
Askote Klippe 79, 80
Ataknanda Valley 113
Attock Cherat Range 95
Attock Shale 95
Autochthonous Folded Belt 82–88, 278

Badrinath Formation 114
Baijnath Klippe 79-80
Baila Formation 86, 87
Baltit Group 252
Baltoro Pluton 308
Banali Formation 73
Banali Klippen 73
Bandal Granite 105
Bandla Limestone 11
Banjar Formation 55
Banna Nappe 146
Bara Bhargal, Mt 2
Barkot Formation 64
Baroch Group 90, 94
Basantpur Formation 61
Beas River 2
Beas Valley 128
Beragou Formation 18
Berinag Formation 54, 55–57, 105, 275, 276
Besham Group 289
Besham Nappe 145
Bhadarwath Formation 215
Bhaga River 2, 131
Bhagirathi Granite 308
Bhagirathi River 2
Bhagirathi Valley 120, 121
Bhagwanwala Formation 90, 91
Bhatwari Formation 116
Bhilangna Valley 3, 117
Bhimdasa Formation 86, 87
Bhimtal Volcanics 66, 76
Bijni Formation 74
Bijni Thrust 75
Bilaspur-Simla Hills 11
Biostratigraphy, Subathu Group 13–18
Blaini Formation 54, 59, 66, 277
Bongo La Formation 264
Borom Formation 264
Boulder Conglomerate Formation 9, 24, 26–28, 41
Brahma Sakli, Mt 1, 2
Brahmaputa River 2
Bryozoa 69
Budhi Schist 108, 151, 153
Bundarpunch, Mt 2
Bundelkhand Massif 43, 46
Burtsa Formation 248, 251

Cambrian Stratigraphy
  Abbottabad Formation 101
  Amber Dolomite 97
  Garbyang Series 151, 160
  Haimanta Group 171, 183
  Hilap Formation 180
  Jhelum Group 90
  Phe Formation 186
  Ralam Formation 160
  Tal Formation 71
Campbellpore Basin 49–51
Carboniferous Stratigraphy
  Kali Series 151
  Kanawar Group 171
  Lipak Formation 186
  Tso Morari Crystallines 219
Central Crystalline Zone 108–111, 134, 279
Chabin Formation 30
Chail Formation 80, 81, 82, 84
Chail Group 119, 121, 123, 125, 126, 128–130, 133, 275, 281–282
Chail-Ramgarh Group 54, 57
Chak Jabbi Formation 97
Chakrata Formation 54, 57, 58–60

Chalt Formation 252, 253, 257, 291
Chamba Formation 212
Chamba Group 132, 133
Chamba Nappe 84
Chamba Valley 2
Chamoli Quartzite 55
Champawat Granodiorite 59, 77, 78
Chandpur Formation 54, 57, 59, 64, 65
Chandra River 2, 131
Chang Chen Mo Valley 2
Chattru Phyllite 138
Chaukhamba, Mt 2
Chaur, Mt 123–125
Chenab River 2, 131
Cheneb Valley 136–139
Chhaosa Formation 61
Chhidru Formation 90, 93
Chichali Formation 90, 94, 101
Chikkim Formation 171, 179, 186, 197, 291
Chilas Complex 252, 253, 257
Chimnun Formation 30
Chinje Formation 9, 31–33, 33, 36–38, 41
Chip Chap Valley 2
Chiplakote Crystallines 108
Chocolate Series 155, 164
Chongtash Formation 246, 247, 250
Chor Granite 81
Chuling Formation 186, 198
Collision Modelling 294, 295
Conodonts 69
Counter Thrust 149
Cretaceous Stratigraphy
  Giumal Formation 171, 180, 182, 186
  Kawagarh Marl 97
  Sangchamalla Formation 171, 180, 182, 186
  Shell Limestone 73
  Shyok Volcanics 219
  Surghar Group 90

Dagshai Formation 9, 18, 20
Dalhousie Granite 84, 133
Dalmon Formation 215
Damta Group 275, 277
Damtha Group 54, 56, 58, 59
Dandot Formation 90, 92
Darchan Ophiolite Melange 270
Darwaza Formation 95
Dast-i-Ghil Sar, Mt 2
Dataganj Fault 46
Datta Formation 90, 94, 101
Debguru Porphyry 59, 76
Deepsang Plains 2
Deformation Phases
  Central Crystallines 110
  Indian Plate 319
  Karakoram Block 320
  Tso Morari Crystalline Complex 221
Dehradun Depression 12
Dehradun Valley 1
Delhi–Hardwar Ridge 43, 45
Delhi–Lahore–Sargodha Ridge 43–45
Deoban Formation 54, 56, 57, 59, 62, 63, 105, 277
Deoban–Shali Cycle 275, 277
Depsang Formation 246, 249, 251
Devonian Stratigraphy
  Muth Quartzite 151, 160, 171, 180, 186
  Nowshera Formation 97
Dhakner Formation 95, 278
Dharagad Group 60
Dharamandal Group 64
Dharamkote Limestone 84
Dharamsala Group 9, 12, 20, 21, 30, 129
Dharamsala Trap 84
Dharchula Thrust 152
Dhauladhar Range 1, 2
Dhauliganga River 3
Dhauliganga Valley 113
Dhok Pathan Formation 9, 34, 37, 38, 41
Dichili Dolomite 62
Diong Formation 219, 244
Doda Granite 139
Dogra Slate 12, 87, 206
Drainage Patterns 2, 3
Dras Formation 218, 219, 223–225, 291
Dudatoli Granite 78
Duns 1

Eocene stratigraphy
  Chulung Formation 186, 199
  Marghalla Hill Limestone 85
  Murree Group 20
  Rajpur Formation 85
  Subathu Group 12–14, 29

Faizabad Ridge 43, 46
Fatu La Formation 197
Fenestella Shale 151, 155, 210
Ferruginous Oolite 165, 186, 196
Floral Stratigraphy 16–18
Foothills Belt 10–31, 36, 37
Foraminiferal Zones 13–14
Foreland Basin 295–297

Galwan Valley 2
Gamgul Formation 215
Gamir Formation 86, 87
Gamri Formation 55
Gamri Quartzite 123
Gandak Depression 43, 46
Ganga Basin 4, 42–43, 295, 296
Ganga River 2, 3
Ganges River 2
Gangolihat Dolomite 62
Ganmachidam Formation 171, 174, 186, 191
Garbyang Formation 108, 151, 153, 160, 162
Garchandi Formation 30
Garhwal Formation 276
Garhwal Group 119, 121, 123, 277

Garhwal Nappes 73–75
Garhwal Thrust 75
Geothermobarometry 115, 116
Gilgit River 2
Gilgit Valley 2
Gircha Formation 264, 290
Giri River 2

Giumal Sandstone 157, 161, 165–167, 171, 179, 180, 186, 196, 291
Godwin Austin, Mt 2
Goriganga River 3
Goriganga Valley 108
Gravity Anomalies 310–311
Gumalikhet Formation 59
Gurla Mandhata Crystallines 268

Haimanta Formation 126, 127
Haimanta Group 133, 170, 183, 280
Hansa Formation 186
Hanse Formation 186, 193, 194
Harpat Tso Formation 289
Hazara Formation 95, 99, 103, 278
Hazara Nappe 146
Hazira Formation 101, 278
Heavy Mineralogy 22, 23, 29
Hilap Formation 180
Himalayan Foot Hills Fault 5, 9
Hirpur Formation 47
Hissart Formation 95
Hudoli Formation 55
Hundri Formation 219, 242
Hunza Plutonic Complex 262, 292
Hunza Valley 2
Hyolitha 69

Indian Plate 273, 319
Indus Formation 218, 219, 231–235, 317
Indus River 2
Indus Suture 7, 218, 219
Indus Suture Melange Group 143
Indus Suture Thrust 273
Indus Suture Zone 217, 218, 273
Infra-Krol Formation 54, 66, 67, 277
Inzari Limestone 95

Jammu Hills 11, 20, 22
Jaunsar Group 80, 277
Jaunsar–Simla Cycle 275, 277
Jhelum Group 90, 91
Jhelum River 2
Jigal Complex 252, 254, 255
Jispa Granite 133
Joshimath Formation 114
Jungbwa Nappe Peridotite 269
Jurassic Stratigraphy
  Baroch Group 90
  Dras Formation 219
  Kioto Limestone 171, 178, 179, 182, 186
  Poonch Mandi Formation 85
  Spiti Formation 180, 186
  Spiti Shale 161
Jutna Formation 90, 91
Jutogh Formation 80
Jutogh Group 119, 121, 122, 125, 126, 129–131, 275, 282
Jutogh Klippe 80–82
Jutogh Thrust 285
Jutogh–Almora Group 54, 57

K2, Mt 2
K2 Gneiss 263, 292
Kafirstan Mts 2
Kailas Conglomerate 270
Kailas Granite 271
Kailash Range 2
Kakkarhatti Formation 81
Kala-Chitta Range 95-97
Kalakot Formation 18
Kalapani Limestone 151, 156, 157, 161, 164
Kalargali Formation 215
Kalhel Limestone 212
Kali Formation 151, 155
Kali River 2, 3
Kali Valley 108
Kalimath Formation 116
Kamet, Mt 3
Kamila Amphibolite 252, 253, 255
Kamlial Formation 9, 31, 33, 36, 37, 38, 41
Kanawar Group 171, 173
Kande Plutonic Complex 263
Kangan Granite 139
Kangi La Formation 186, 197
Kangra Depression 12
Karakoram Batholith 261, 292, 308
Karakoram Plutonic Complex 249, 252, 273
Karakoram Range 2
Karakoram Supergroup 219, 245, 252, 273
Karcham Group 127
Karewa Sediments 47, 48, 50
Kargil Formation 218, 219, 235, 236–268
Karsha Formation 186, 187
Kasauli Formation 9, 20, 21
Kashmir, Vale of 2
Kashmir Basin 47–49
Kawagarh Formation 95, 97, 102
Kedarnath, Mt 3
Khagan Nappe 146
Khagan Valley 146, 147
Khaira Quartzite 60
Khalsar Formation 219, 242
Kharaptal Formation 112, 113
Khardung Formation 218, 219, 239, 240
Khewra Formation 90, 91
Khumdan Formation 246, 248, 251
Khurnak Formation 203
Kingriali Formation 90, 94
Kiogar Nappe Melange 268

Kioto Limestone Formation 157, 161, 164, 171, 178, 179, 186, 195, 291
Kirana Hills 43
Kishor Formation 92
Kishtwar Formation 277
Kishtwar Valley 136–139
Kohistan Batholith 252, 256
Kole Molasse 219, 244
Kong Slates 202
Koyul Group 252
Kringkrong Series 151, 155
Krol Belt Supergroup 54
Krol Cycle 275, 277
Krol Formation 53, 54, 59, 67–69, 104, 277
Kuling Shale 157, 161, 163, 164, 171, 174, 180, 183, 186, 192
Kulu Valley 2
Kundil Formation 264
Kunihar Formation 61
Kunzum La Formation 186
Kurgiakh Formation 186, 187
Kussuk Formation 90, 91
Kuti Shale 151, 156, 157, 161, 164

Ladakh Plutonic Complex 218, 219, 237–239, 268
Ladakh Range 2
Lahaul Group 132, 133
Lahaul Valley 2, 131–133
Laluri Formation 64
Lamayuru Formation 201, 203, 218, 219, 222, 268, 291
Landi Kotal Formation 95
Langera Conglomerate 215
Lansdowne Granite 74, 75
Lansdowne Klippen 73–75
Lapthal Formation 157, 161, 165
Larji Formation 277
Lata Formation 112, 113
Lilang Group 171, 175, 186, 193
Lingshet Limestone 201
Lipak Formation 171, 173, 186, 190
Lockhart Limestone 95, 97
Loharkhet Quartzite 55
Lumshiwal Formation 90, 95
Luzarmu Formation 219, 243

Magnetic Polarity
  Karewa Sediments 48
  Siwalik Group 28, 37–42
Main Boundary Thrust (MBT) 5, 9, 82
Main Central Thrust (MCT) 6, 110, 114, 152, 284–289
Main Frontal Thrust (MFT) 5, 9
Main Karakoram Thrust (MKT) 7, 244, 252
Main Mantle Thrust (MMT) 217, 252, 273
Malari Fault 151
Malkand Granite 145
Malwa Ridge 43
Manaslu Granite 308
Manchop Formation 180
Mandakini Valley 3
Mandhali Formation 54, 59, 64
Mandi Dolomite 84
Mandi–Darla Volcanics 55, 83, 84, 86, 276
Mandi–Rohtang Valley 128
Manglaur Schist 143, 144
Manjir Formation 132, 212, 215
Manki Formation 95, 97, 278
Mansarowar, Lake 2
Manshera Granite 99, 103, 146
Marhalla Hill Limestone Formation 96
Martoli Fault 151
Martoli Formation 108, 112, 113, 114, 151, 153, 158
Masherbrum Migmatite Complex 262
Metamorphism
  Blue Schists 292–293
  Central Crystalline Zone 110–111
  Higher Himalayas 306–308
Mianwali Formation 90, 93, 97
Mineralogy 22, 23, 29
Miocene Stratigraphy 29, 219
Misri Banda Quartzite 97
Mohand Depression 12
Monghyr–Saharsa Ridge 43, 45
Moradabad Fault 46
Morar Chakrata Beds 58, 61
Morgo Formation 246, 248, 251
Munsiari Formation 108, 109, 114
Munsiari Thrust 110, 284
Murree Formation 20, 31, 87, 95, 103, 253
Murree Group 9, 12, 20
Murree Thrust 20, 82
Musakhel Group 90, 93
Mussoorie Hills 2, 11
Mussoorie Range 2
Muth Quartzite 138, 151, 154, 157, 160, 163, 171, 172, 186, 190, 206, 210

Nag Tibba Range 1, 2
Nagri Formation 9, 32, 33, 37, 38, 41
Nagrota Formation 40
Nagthat Formation 54, 59, 65, 66, 76
Nagum Formation 47
Naitwar Group 122, 123
Nakdum Formation 180
Nanda Devi 3
Naoshera Depression 12
Nathuakhan Formation 59, 76
Naulara Phyllite 64
Neotethys
  Closing 318
  Opening 291, 317
Nidar Ophiolite Complex 218, 229-231, 268, 317
Nihal Thrust 152
Nilawahan Group 90, 92
Nimmu Formation 235
Nindam Formation 218, 219, 227, 317
Niti Pass 3
Nowshera Formation 97

Nubra Ophiolite Melange 219, 243
Nubra Valley 2
Nurla Formation 235

Obduction 294
Okhimath Formation 116
Oligocene Stratigraphy 20, 29, 219
Ordovician Stratigraphy
  Misri Banda Formation 97
  Shiala Series 151, 160
  Shian Quartzite 171
  Thample Formation 186
  Tiwri Formation 180

Pabo Formation 30
Palaeocene Stratigraphy
  Kawalgarh Limestone 102
  Lockhart Limestone 97
  Rajpur Formation 85
  Spanboth Formation 186, 199
  Subathu Group 11
Palaeocurrent Analysis 24–25, 33
Palaeontology
  Flora 16–18
  Foraminifera 13, 14
  Vertebrate
    Chinji Formation 32
    Kamlial Formation 31
    Murree Formation 31
    Nagri Formation 32
    Soan Formation 32, 33
    Subathu Group 14–16
Palynology 16–18
Pandukeshwar Formation 114
Pangong Tso Group 219, 245
Panjal Formation 215
Panjal Imbricate Zone 102, 103, 288
Panjal Thrust 82, 288
Panjal Trap 12, 138, 186, 192, 206, 208, 278, 289
Panjal Volcanics 85, 87
Panjpir Formation 97
Panshah Formation 264
Parkachik Formation 135
Parmandal Sandstone 40
Patala Formation 95
Pauri Phyllite 61
Permian Stratigraphy 71, 72
  Kringkrong Series 151
  Kuling Formation 171, 180, 183, 186
  Nilawan Group 90
  Zaluch Group 90
  Zewan Formation 85
Peshawar Basin 49–51
Petrography, Siwalik Group 22, 23, 33
Phe Formation 135, 186
Physiography 1, 2
Pin Dolomite 171, 172
Pindar River 2, 3
Pinjor Formation 9, 24, 26-28, 32, 37, 41
Pipalkoti Formation 62
Pir Panjal Range 1, 47, 133, 134
Pithoragarh Formation 105, 277
Pleistocene Stratigraphy 29
Pliocene Stratigraphy 29
Po Formation 171, 173, 186, 191
Polokong La Granite 219, 221
Poonch–Mandi Formation 85, 87
Potwar Plateau
  Palaeontology 33–36
  Stratigraphy 31–33
Pratap Nagar Quartzite 55
Precambrian Stratigraphy
  Berinag Formation 55
  Budhi Schist 151
  Chakrata Formation 60
  Deoban Formation 63
  Krol Formation 67, 68
  Mandhali Formation 64
  Manki Formation 97
  Martoli Group 160
  Simla Group 61
  Sincha Formation 85
Proterozoic *see* Precambrian
Puga Formation 219, 220, 222, 280
Pukhri Formation 212

Qazil Langer Formation 246, 248, 251

Rahtang Gneissic Complex 131
Raipur Formation 84, 278
Rajpur Formation 85, 87
Rakcham Granite 127
Raksas Flysch Series 269
Ralakung Formation 192
Ralakung Volcanics 289
Ralam Formation 153, 160
Ramani Formation 112, 113
Ramban Formation 86, 87
Ramganga Valley 108
Ramgarh Group 59
Ramgarh Nappe 76, 77
Ramgarh Thrust 76
Ramgonga River 2, 3
Rampur Formation 55, 126, 127, 129, 275, 276
Ramsu Formation 138, 210
Ranjoti Range 2
Rautgara Formation 54, 57, 59–61
Ravi River 2
Rb/Sr dating 279
Reshit Formation 264
Reshun Formation 265
River Patterns 2, 3
Rohtang Group 131, 132
Rupin Valley 121–123
Rupshu Granite 219, 221

Saidu Schist 143, 144
Saklana Formation 74
Saknidhar Formation 58, 60
Salkhala Formation 125
Salkhala Group 81, 82, 87, 134, 206
Salooni Formation 132, 212, 215
Salt Range, Stratigraphy 89–95
Salt Range Formation 90, 91
Saltoro Molasse 219, 243
Samana Sukh Formation 90, 94, 97, 101
Samots Volcanics 84
Sandra Formation 55
Sangchamalla Formation 157, 161, 168
Sangla Blueschist 252–254
Sangra Formation 135, 136
Sanjauli Formation 61
Sankoo Formation 135
Sarda Depression 43, 46
Sarda River 2
Sardhani Formation 90, 93
Saryu Formation 59
Saser Brangsa Formation 245–247, 250
Satengal Klippen 73
Satluj River 2
Satluj Valley 125–128, 133
Sauri Gad Formation 60
Sedimentation Rates, Siwalik Group 33
Seismicity 312–317
Sequence Stratigraphy, Siwalik Group 29–31
Shaksgam Formation 263
Shali Formation 55, 60, 63, 83, 84, 129, 277
Shali Structural Belt 82–88
Shali–Larji Formation 105
Sharda Group 146
Shengus Gneiss 279
Shergol Ophiolite Melange 218, 219, 225–227, 268, 317
Shey Granite 292
Shiala Formation 151, 154, 160, 162, 163
Shian Quatzite 171, 172
Shimawari Formation 90, 94
Shyok Ophiolite 219, 244
Shyok River 2
Shyok Suture 7, 218, 219, 241, 273
Shyok Valley 2
Shyok Volcanics 219, 239, 242
Sillakong Formation 201
Silurian stratigraphy
  Panjpir Formation 97
  Pin Dolomite 171
  Variegated Series 151
  Yamrong La Formation 180
Simla Hills 2, 11, 20, 81
Simla Slate Group 11, 55, 58, 61, 105, 277
Simurs Group 9
Sincha Formation 85, 87
Sirban Limestone 11, 12
Sirdang Unit 108
Sissu Formation 132
Sissu Group 131
Siwalik Group 9, 12, 57
  Depositional Environment 24–28
  Magnetic Polarity 37–42
  Outcrops 129
  Petrography 22, 23
  Sequence Stratigraphy 29–31
  Stratigraphy 21, 22
  Vertebrate Palaeontology 33–37
Siwalik Hills 1, 295, 296
Soan Formation 32, 33
Sor Slates 64
Spanboth Formation 186, 198
Spiti Basin 2
Spiti Shale 157, 161, 165, 171, 179, 180, 186, 196
Spongtong Nappe 231
Spongtong Ophiolite 294
Stagcgar Cherty Limestone 263
Structures
  Higher Himalaya 300–302
  Lesser Himalaya 299, 300
  Outer Himalaya 297–299
  Tethys Himalaya 302–304
  Trans Himalaya 304–306
Subathu Formation 84, 277
Subathu Group 9, 57
  Age 11–13, 105
  Biostratigraphy 13–18
  Facies Analysis 18, 19
  Setting 11
Suketi Thrust 82
Sulcactutus Band 161, 165
Sunbain Quartzite 215
Sundarnagar–Damta Cycle 275, 276
Sundernagar Formation 55, 60, 63, 84, 277
Supin Valley 121–123
Surghar Group 90, 94
Suru Valley 135
Suti Formation 180
Swat Granite 146
Swat Granite Gneiss 143, 144
Swat Nappe 145
Syringothyris Limestone 138, 210

Taglang La Formation 202, 219, 220, 222, 280
Tal Formation 11, 54, 59, 69–73, 102–105, 277
Tanakki Boulder Bed 99, 100
Tanawal Formation 99, 146, 278
Tandi Group 132
Tanol Formation 103
Tatakuti, Mt 1
Tatrot Formation 9, 24, 26–28, 32, 37, 41
Tawaghat Crystallines 108
Tectonic Zones 5–7
Tejam Dolomite 62
Tejam Formation 277
Tejam Group 54, 59
Tekri Formation 264
Teram Kangri, Mt 2
Tethyan Thrust 149
Tethyan Thrust Fault 283

Thamba Kurkur Formation 186, 193, 194
Thango Formation 186
Thaple Formation 186, 190
Thumka Gad Thrust 152
Tibet Karakoram Block 273
Tiuni Formation 60
Tiwri Formation 180
Tobra Formation 90, 92
Tons River 2
Tons Valley 121–123
Trans Himalaya Fault 283
Tredian Formation 90, 94
Triassic Stratigraphy
  Kuti Formation 161
  Lamayuru Formation 219
  Lilang Group 171, 175–178
  Mianwali Formation 97
  Musakhel Group 90
  Poonch Mandi Formation 85
Tso Morari Crystalline Complex 218, 219, 268, 280
Tundapathar Limestone 11
Tupchilang Formation 132

Uttar Pradesh Sub-Basin 46
Uttarkashi Limestone 62

Vaikrita Group 108, 112, 113, 119, 121, 126, 129, 151, 158, 275, 282–283
Vaikrita Thrust 110, 284, 285
Variegated Formation 151, 154, 157, 160, 163
Vertebrate Stratigraphy
  Chinji Formation 32
  Kamlial Formation 31
  Murree Formation 31
  Nagri Formation 32
  Soan Formation 32, 33
  Subathu Group 14–16

Wangtu Gneissic Complex 127
Warcha Formation 90, 92
Wargal Formation 90, 93

Xigaze Ophiolite 317

Yamrong La Formation 180
Yamuna River 2
Yashkuk Formation 264
Yasin group Melange 252, 253, 258
Yong Limestone 163

Zaluch Group 90, 93
Zanskar Carbonates 200–202, 203
Zanskar Crystallines 134–140
Zanskar Range 2
Zanskar Supergroup 268
Zanskar Thrust 149
Zewan Formation 85, 87, 278
Zildat Ophiolite Melange 229, 268
Zozar Formation 186, 193, 194